



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/762,299	01/23/2004	Vishnu K. Agarwal	M4065.0614/P614 A	4633
24998	7590	02/22/2005	EXAMINER	
DICKSTEIN SHAPIRO MORIN & OSHINSKY LLP			WILSON, ALLAN R	
2101 L Street, NW			ART UNIT	
Washington, DC 20037			PAPER NUMBER	
			2815	

DATE MAILED: 02/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/762,299

Applicant(s)

AGARWAL, VISHNU K.

Examiner

Allan R. Wilson

Art Unit

2815

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 January 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 47-59 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 47-52 and 54-57 is/are rejected.
- 7) ☒ Claim(s) 53, 58 and 59 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 47, 51, 52, 54 and 55 are rejected under 35 USC § 102(b) as being anticipated by Hieda et al. (“Hieda”) U.S. Patent No. 4,942,459.

With regards to claim 47, Hieda illustrates in figures 1-11, particularly figures 1 and 2, (entire document) forming a plurality of photosensors (Q_1 in 15-17); and forming a plurality of charge storage capacitors C_2 , each for receiving collected charges from an associated respective one of said plurality of photosensors, a storage capacity of each said charge storage capacitor corresponding to electron production capability of an associated respective photosensor (col. 4, lines 40-46).

With regards to claim 51, Hieda illustrates in fig. 10(B) each said charge storage capacitor is formed as a flat plate capacitor 104, 106 and 107.

With regards to claim 52, Hieda illustrates in figs. 1 and 2 a plurality of transfer transistors Q_4 each in electrical communication with a respective one of said plurality of storage capacitors C_2 .

With regards to claim 54, Hieda illustrates in figs. 1 and 2 the step of forming said plurality of charge storage capacitors C_2 comprises establishing electrical communication for

Art Unit: 2815

receiving collected charges from a respective one of said plurality of photosensors through a respective floating diffusion region Q₄ which receives charges from said respective one of said plurality of photosensors Q₁.

With regards to claim 55, Hieda discloses in col. 3, line 38 to col. 4, line 46 the steps of providing a plurality of photosensors (Q₁ in 15-16) comprising at least a first portion responsive to a first color of light R, and a second portion responsive to a second color of light G; and

forming a plurality of storage capacitors (C₂ in 15-16) in electrical communication with a respective one of said photosensors, a storage capacity of each said storage capacitor corresponding with electron production capability of each said respective photosensor, said storage capacity of storage capacitors associated with photosensors of said first portion being different from said storage capacity of storage capacitors associated with photosensors of said second portion.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 48-50, 56 and 57 are rejected under 35 USC § 103 (a) as being unpatentable over Hieda as applied to claims 47 and 55 above, and further in view of Savoye, U.S. Patent No. 6,489,992.

Art Unit: 2815

With regards to claims 48-50, 56 and 57, Hieda is discussed above, it does not show a storage capacity of between about 3 and about 20 femtofarads. Savoye illustrates in figure 5 (col. 24, lines 9-23) a storage capacity of between about 5 and about 10 femtofarads. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have capacity of between about 3 and about 20 femtofarads for low-light-level imaging.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Allowable Subject Matter

Claims 53, 58 and 59 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

Applicant's arguments with respect to claims 47-59 have been considered but are moot in view of the new ground(s) of rejection.

Art Unit: 2815

The argument that “a storage capacity of each said charge storage capacitor corresponding to electron production capability of an associated respective photosensor” is disclose by Hieda in col. 4, lines 40-46.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from an examiner should be directed to Primary Examiner Allan Wilson whose telephone number is (571) 272-1738. Examiner Wilson can normally be reached 7:00-4:00 Monday-Thursday and 6:00-3:00 on Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tom Thomas can be reached on (571) 272-1664. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2815

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to read "A. Wilson", with a long horizontal flourish extending to the right.

Allan R. Wilson
Primary Examiner
16 February 2005